

Using Blogging as a Tool to Further Teacher Professional Development

Mark Hines

Department of Educational Technology

University of Hawaii at Manoa

Honolulu, HI, USA

mehines@hawaii.edu

Abstract: Technology has changed the way effective educators learn and work with peers and students. Social interaction powerfully shapes teachers' affective and cognitive flexibility in adapting their teaching methodology. Computer networks now allow adaptable social communication tools that increase teachers' interactions and personal growth. This paper first looks at the research in teacher development through social constructs. It then summarizes a study of teachers' first interaction with a school weblog to assess whether their perceptions confirm a sense of community conversation and value. Regardless of their experience prior to the use of the weblog, teachers reported ease in using it. Moreover, they felt it was an important tool for campus communication. Teachers also felt that professional use of tools leads to higher adoption in classroom practice. This paper concludes by considering implications of the survey results and developing some recommendations for further research.

Introduction

There are powerful opportunities in education to change the way teachers build professional knowledge and implement it in the classroom. Teacher growth is critical, since technology presents both great opportunity and challenge. Teachers must be flexible learners and advance their personal knowledge and professional repertoire. Broad technology adoption opens up possibilities for improving learning and professional growth. Teachers are still learning to use basic technology tools in their professional lives and in classroom instruction. Many studies have investigated how teachers behave professionally, what causes them to consider change and how to move them forward. It is important to understand teacher culture and to know what methods are most likely to truly bring permanent change to teacher behavior. The past 5 years have seen new technology developments that emphasize social interaction. These new communication tools utilize local network capabilities and the ability of the Internet to connect many people over space and time. The term Web 2.0 has been coined to describe the capability of sites such as MySpace, Wikipedia, Flickr and many others (Tapscott & Williams, 2006). These sites and their competitors all offer a new way of utilizing networks that emphasize the value of collective conversation. Newer technologies that take advantage of the social ability inherent in networks open up the possibility of more teacher

interaction. This in turn may well create greater opportunities for teacher growth. This study is designed to look at three research questions regarding teacher interaction:

- Do social interactions affect teacher flexibility and willingness to adopt new practices?
- Do weblogs act as a vehicle to promote greater social interaction in teachers?
- Do teachers' impression of a technology and affect their thinking about whether it is appropriate to use in classrooms?

A group of teachers who have been using a school weblog for a few months will be surveyed to look at implications of the research. Summary data will be analyzed to examine the effects of blogging on teacher perception of the usefulness of this technology. Implications and considerations for future research will be discussed. A review of current research studies sets the context for this survey.

Literature Review

The review of literature discusses the following areas: (a) teacher professional growth through social interaction, (b) studies on electronic communities and how they build professional dialogue, (c) how Web 2.0 tools have created more powerful ways to communicate, and (d) summary of some meta studies that indicate the power of these experiences.

Teacher Professional Development through Social Interaction

Teacher growth and the adoption of new tools and strategies is an ongoing effort in schools. It is common for schools to set up training sessions after regular teaching hours or on professional development days. In these sessions teachers are introduced to new, emerging techniques and tools in their profession. In many cases, the knowledge from this exposure is short lived as teachers hear ideas, but seldom implement what they were exposed to (Brown, 2004). It is common to have a two hour faculty session that introduces a new tool, but then gives little or no time for reflection, discussion and development of this new idea. Teachers typically are given little time to digest what they have seen and heard. Yet, there is ample research that demonstrates that teacher interaction is what drives real learning and change (Brown, 2004). Teachers have busy days full of teaching classes, assessing work, parent communication and extra duties. There is precious little time to acquire information about new approaches through reading, interacting with an expert, sharing and designing in small groups, enacting mandated policies, and interacting socially. Although there is an inherent economy in presenting information to passive teachers, these efforts seldom create teacher buy-in on critical issues. Chalmers (2006) makes the case that although face-to-face teacher presentations may expose teachers to new ideas, there needs to be time for teachers to reflect, interact, adjust and grow. Communities of practice are centered around the belief that interaction and professional exchange are a critical means of growth (Chalmers & Keown, 2006). Stigler and Hiebert (Stigler & Hiebert, 1999) studied American, Japanese and German classrooms. One of the marked differences in American education is the top down way that professional information and knowledge are expected to be acquired and implemented. In Japanese classrooms, by comparison, teachers spend much more time

than their American colleagues in collaborative teams analyzing, developing and assessing the success of self-generated curricular ideas. If teachers do not have the opportunity to talk, listen and reflect on their learning, they are much less likely to take any new ideas to heart. The importance of interaction cannot be overstated: [teachers] “do not actually learn from experience as much as [they] learn from reflecting on experience” (Posner, 2005).

Another issue with teacher meetings is the tendency of three disparate characteristics of teachers to arise: individuality, cooperation and competitiveness (Klein, 2005). This conflict of individuality and community causes meetings to be perceived as a place where teachers are forced to conform. Communities of practice need to be developed and nurtured as a means of having teachers feel empowered by their own voice and choice. Once teachers feel they have a say in the agenda, they become much more open to change (Klein, 2005). If a social norm is developed through group interaction, there is much greater likelihood teachers will change their behavior (Koszalka, 2001). Online communities offer an opportunity to leverage this strength of group interaction and reflection.

Studies on Electronic Communities

There have been online communities for a decade now, so there has been much research published on electronic interaction and how it affects those immersed in it. Although more of these studies have been directed at students in online classes, there are studies on teacher behavior and even those studies measuring students can be reasonably be applied to classroom teachers. Successful online teachers have a set of behaviors and personal characteristics that model many of the communication traits desired for professional growth. Collaboration is an important skill that online teachers exhibit (Davis & Roblyer, 2005). Since there is research that teachers learn and grow professionally through active professional discourse and not passive learning about innovation, tools that support discourse need to be brought into schools to provide the opportunity for greater interaction. Moreover, there is limited face-to-face time in a typical school calendar for teachers to share, collaborate and design collectively. As a result, there needs to be another means to build in more communication for teachers. Listservs were the first developed online threaded discussion boards. Early studies on listserv use showed the promise of electronic interaction (Gillespie, 1998). Teachers using listservs were more engaged and expressed their pleasure in having a tool to enable conversation beyond face-to-face meetings.

There is a caveat, however. Teacher exposure to tools and even their use in classrooms does not necessarily lead to the most powerful uses of technology (Dawson, 2006). Teachers may first start using a tool, but never develop beyond rudimentary use of it. Surveys of teachers using new tools indicate some adoption, but in many cases the use does not develop or support higher level thinking or implementation (Dawson, 2006). There is a need for teachers to reflect and converse about these tools to understand their implications, and therefore affect their professional growth and their choice for how they will use it. Teachers need more support in developing the skills they are required to use

with these technologies (Davis & Roblyer, 2005). Schools are working to address this problem by creating staff positions that support technology use. Ultimately, The ability for electronic communities to bring a larger group together is clear. There are a variety of ways they can be implemented to be more powerful. In some communities, trusted mentors can add their voice to a professional conversational (Gillespie, 1998). There is a concern whether teachers can make the transition from face-to-face interaction to comparable online tools. Studies have shown that teachers exposed to online tools for social interaction recognize the power of technology to create a learning environment. These teachers begin to assimilate tools such as chats, email and online discussions (Carneiro, 2006). This latest wave of online interaction is still in its infancy for most teachers, however. Glazer and Song (Glazer, Hannafin, & Song, 2005) emphasize the need for teachers to support each other. Once a plan is in place, teachers can collectively collaborate to build a professional knowledge base that can be shared, discussed and implemented.

Web 2.0 as a vehicle to empower professional conversation

Although online communities have existed for over 10 years, the full feature of social interaction has been limited. Course management software such as WebCT, Blackboard and Moodle have little inclusion of the social networking features that have become common on websites like MySpace and Facebook (Du & Wagner, 2007). These new weblogs (also referred to as blogs) have the power to create greater interaction due to their ability to archive, create immediacy in conversation and allow many to have equal voices in professional or personal discussions (Tapscott & Williams, 2006). Additionally, there is clear research that by using a tool, there is much greater likelihood that the teacher will understand its implications and use it more appropriately in class (Koszalka, 2001). In a study where teachers used a technology to describe the same technology, they were much more likely to use the tool. Mediation is the key to raise the mental effort in deep conversations on technology (Lavonen, Lattu, Juuti, & Meisalo, 2006). The interaction that Web 2.0 applications offer for teacher communication is important. In one study, teachers read an article online. The control group emailed their reflection, but the treatment group was allowed to share their responses in a public forum. The treatment group had a higher affective score due to the conversational aspect of the experience (Koszalka, 2001).

Another important feature to consider is the depth of conversation. There is a tendency in professional conversation for there to be knowledge confirmation, a lower level way of knowing. If conversation can be steered to a higher level goals, the impact is greater. To make the experience more powerful, deeper conversation needs to include negotiation, co-constructions, application and innovation (Lavonen et al., 2006).

Impact with Implementation

Ultimately, the goal of this process should be more effective communication, better professional growth and better use of tools with students. Matzen (2007) summarized results from research studies looking at the question of whether constructivist teachers

use technology more effectively or if technology makes teachers more constructivist. The result showed that teachers that were more constructivist used tools better, but also that teachers became more constructivist by using the tools. This is a powerful result, for it shows one need not be overly concerned with teachers' experiences either with technology or current pedagogy, since both are powerfully affected by each other. The goal of this paper's study then, is to see if even small steps towards using Web 2.0 technologies such as a weblog effect teachers' perception of the social aspect of communication. Teachers who use a tool and find it professionally rewarding, are very likely to make gains in implementing that tool in the classroom. Just as importantly, teachers who come to appreciate the social aspect of a tool will more likely use it as a means of professional growth.

Methodology

Mid-Pacific Institute is a small, independent Pre K-12 school in suburban Honolulu, Hawaii. The Elementary School has 250 students and 20 teachers in grades Pre-K to 5. The Middle School has 450 students and 25 teachers. The High School has 800 students and 60 full and part time teachers. The school implemented 3 faculty specific intranets in early September 2007. They were named "All School Intranet", "High School Intranet" and "Middle School Intranet". For the purpose of this study, the term intranet, weblog and blog are synonymous, since they refer to the same tool. There are regular postings to the intranets, and teachers are expected to check the site daily for updated postings. These postings include communication documents from the administration, IT department, EdTech department, Facilities and Human Resources. There are both posted documents and questions soliciting feedback via the commenting feature. The software engine used was Movable Type, which uses weblogs as its main architecture. The intranets have 3 stated goals from the Principals:

- Decrease paper usage by creating effective online resources
- Improve communication by making it more timely, more directed and searchable
- Allow faculty an opportunity to be active participants by enabling the comment feature and encouraging feedback

By late October 2007, there were 46 Middle School, 11 High School, and 19 All School Intranet postings. In some of these postings, teachers were encouraged to respond. In other postings, the posting was informational, but commenting was not turned off. In total, there were 16 All School, 34 High School and 14 Middle School comments. Although this development of an online community is at it's infancy, the goal of this study was to survey teachers that had used the comment feature, and an equal number of non-commenters. They were asked questions about their experience with the intranet and specifically their perceptions regarding the social feature of it. A survey was emailed to 30 staff from the high school who were asked to take part in this project. Of that initial group, 22 responded and agreed on the conditions of anonymity. The survey questions are given in Table 1:

Table 1. Survey Questions

1. Before the HS Intranet, I had read a blog before. (yes/no)
 2. Before the HS Intranet, I had commented on a blog before (yes/no)
 3. I have commented at least once on the school's intranet (yes/no)
 4. I have read comments on the school's intranet (yes/no)
- The remaining questions are scored on the following scale:
- 1: strongly agree 2: somewhat agree 3. neutral 4. somewhat disagree 5. strongly disagree 6. Not Applicable
5. Posts on the intranet serve an important role in campus communication
 6. Adding comments to the intranet serve an important role in campus conversation
 7. I find reading the intranet easy
 8. I find commenting on the intranet easy
 9. The information on the intranet is important
 10. The information on the intranet is timely
 11. I believe my personal and professional technology use affects my ability to adopt technology in the classroom
 12. Please give any additional comments

The first 4 questions of the survey were designed to allowing sorting of the survey group by their experience and participation in the school intranets. Specifically, Questions 1 and 2 were designed to see if the staff had any experience with weblogs prior to September 2007. Questions 3 and 4 were designed to gauge the involvement of the teachers in reading and posting comments on the intranet. All teachers were required to read the postings, so these questions were designed to gauge the level of involvement of the teachers and their interactions with the comment feature. This in turn would allow some analysis of how this social feature was perceived. The remaining questions were designed to measure the attitude of the staff regarding the weblog. They inquire about relevance (Questions 5, 6, 9 & 10) and attitude (Questions 7, 8 11) regarding the intranet.

Results

The survey was given in early November 2007. The summary results for the 22 respondents are given below in Tables 2 & 3:

Table 2. Survey Summary Results Yes/No Questions

	Yes	No
Before the HS Intranet, I had read a blog before	13	9
Before the HS Intranet, I had commented on a blog before	8	14
I have commented at least once on the school's intranet	16	6
I have read comments on the school's intranet	21	1

Table 3. Survey Summary Results 5 Point Scale Questions

	Strong agree	agree	neutral	disagree	Strong disagree
Posts on the intranet serve an important role in campus communication+	7	13	0	1	0
Adding comments to the intranet serve an important role in campus conversation	4	15	3	0	0
I find reading the intranet easy	16	6	0	0	0
I find commenting on the intranet easy*	18	2	0	0	0
The information on the intranet is important+	7	10	3	1	0
The information on the intranet is timely	10	10	1	0	1
I believe my personal and professional technology use affects my ability to adopt technology in the classroom	15	7	1	1	0

* two respondents selected "Not Applicable"

+ one respondent did not answer

Table 2 data show that although many of the teachers had neither used nor created content on a blog before, the majority of teachers created comments and all but one had read the postings on this new school blog. This is a substantial increase in the use of a new technology for teachers. Table 3 focuses more on teacher perceptions of this new tool. Almost all staff found the intranet easy to use and relevant in their professional lives.

Upon closer examination, some other observations can be made. If the numeric values are added to determine a mean score, then overall summary data can be gleaned. Groups were analyzed by those who had blogged before and those who had never blogged. The results are given in Table 4:

Table 4. Mean Results for Bloggers and Non-bloggers

	Overall mean N = 22	Non- bloggers Mean N= 9	Bloggers Mean N= 13
Posts on the intranet serve an important role in campus communication	1.8	1.9	1.5
Adding comments to the intranet serve an important role in campus conversation	2.0	2.0	1.9
I find reading the intranet easy	1.3	1.3	1.2
I find commenting on the intranet easy*	1.1	1.3	1.0
The information on the intranet is important+	1.8	2	1.7
The information on the intranet is timely	1.7	1.8	1.6
I believe my personal and professional technology use affects my ability to adopt technology in the classroom	1.6	1.4	1.6

(1=Strongly Agree, 2= Agree, 3=Neutral, 4=Disagree, 5= Strongly Disagree)

Whether teachers had blogged before or not, their mean scores on ease of use, relevance, and professional implications are high. It should be noted that lower scores indicate a more positive response.

Discussion

The data support a very powerful finding: although roughly half of the teachers had never read a blog before September and the vast majority had never commented, they had all read and all but 2 had commented by the time they completed the survey. Even though the intranet is still early in its implementation, the majority of responses indicate a positive attitude about both its relevance as well as its affective quality.

The data support an interesting conclusion: whether or not the user had blogged before, they had a similar, positive impression about the intranet. For example, for Question 7: “I find reading the intranet easy”, the mean score for Non-Bloggers and Bloggers is the same. The implication based upon the review of literature is clear: The intranet has the ability to amplify faculty conversation. The perception of staff is positive and open to new ways of communicating. One teacher commented:

I like that we’re utilizing the blogs in a professional manner. There was one post that the principal put up about the opinions of where faculty meetings should be held that I thought was useful. Granted, being the teacher that I am, I felt that the people that were the most opinionated were going to be the ones that voiced their opinion and could create some bias in the true opinion of the overall faculty, but it invites us to voice our opinion about some issues that some people may not be comfortable with speaking up about in person.

Carneiro (2006) makes the case that a teacher's philosophy is more important than their technical level. In this small starting survey, the difference between novice and experienced bloggers support this finding. Whether they were new to blogging or have participated before, teachers are just as likely to read, comment and understand the implications of this form of social interaction. Just as importantly, teacher responses to Question 11 "I believe my personal and professional technology use affects my ability to adopt technology in the classroom" indicate that teachers understand the link between personal technology use and implementation in the classroom.

There were concerns expressed by some teachers about whether blogs were replacing paper and email communication or just adding another layer to an already crowded arena of communication tools. One teacher summarized this thought as follows:

I can see blogging becoming a huge time consumer for those who participate and a festering sore for those who don't (for example, if we are expected to read the commentary, if we are expected to participate in the ongoing conversations or at least to be aware of their contents).

Most teachers, however made the connection between shifting paradigms of communication:

I think the intranet is great but will be even more pleased when we all will go directly to the intranet and not other sources as it becomes redundant. It is convenient to have one central location to go to instead of different areas which can be time consuming. Overall, the intranet will prove helpful to all at MPI

Future Implications

The findings from studies on electronic communication are important to apply to these survey results. Carneiro (2007) makes the case that new tools like blogging take more time to develop when compared to instant tools like chatting. This causes a delay in adoption that needs to be considered. The initial approval of the intranet might well not be sustained as the day-to-day use may require new behaviors in teachers that they are not prepared to commit to. Chalmers (2006) also finds that when new communication tools are introduced, if the group becomes too large, intimacy decreases and participation drops off. With a staff of 60 sharing ideas and commenting, there may be an initial increase in use, but as the number of voices becomes too much to handle, others may be driven away. There is a need to make sure that there is support in both moderating the use of the intranet, as well as leadership in how it is used. The more the users feel a guiding hand, the more likely they will work with the tool (Lavonen et al., 2006). Perhaps toughest of all is the continuous change in networks and the information that flows through them. The next evolution of the Internet, dubbed the "Semantic Internet" will expand on how information is tailored for each user. Blogs may know each participant and tailor reading and responses to specific interests for the user. New technologies will improve the social nature of electronic communities and virtual worlds will allow users to see recognizable facial expressions. This will greatly improve the impact of these virtual communities (Cooner, 2004).

Conclusion

The research on staff development makes it clear that faculty involved in conversation are more likely to have positive, lasting growth as professionals. Blogging as a form of social conversation is relatively new in education, but shows great promise as a means of supporting learning communities. The nature of blogs in both allowing comments and bringing in community reading and writing opens up powerful new venues for growth. Blogs extend conversation through time with the ability to archive and keep a lasting record of information and ideas. The study performed in this paper confirms that staff acted on and understood the power of this new form of extended faculty conversation. Their quick adoption of and appreciation for the power of this new communication tool opens up the possibility of greater growth. Over time, blogs and their similarly grounded Web 2.0 counterparts will empower teachers. This empowerment will provide a structure that will engage teachers and enhance their professional growth. More study is needed to see whether the challenges of information consolidation and lively communities of practice are sustainable over time.

References

- Brown, K. (2004). Technology: Building interaction. *TechTrends: Linking Research & Practice to Improve Learning*, 48(5), 36-38.
- Carneiro, R. (2006). Motivating school teachers to learn: Can ICT add value? *European Journal of Education*, 41(3/4), 415-435.
- Chalmers, L., & Keown, P. (2006). Communities of practice and professional development. *International Journal of Lifelong Education*, 25(2), 139-156.
- Cooner, T. S. (2004). Preparing for ICT enhanced practice learning opportunities in 2010--a speculative view. *Social Work Education*, 23(6), 731-744.
- Davis, N. E., & Roblyer, M. D. (2005). Preparing teachers for the "Schools That Technology Built": Evaluation of a program to train teachers for virtual schooling. *Journal of Research on Technology in Education*, 37(4), 399-409.
- Dawson, K. (2006). Teacher inquiry: A vehicle to merge prospective teachers' experience and reflection during curriculum-based, technology-enhanced field experiences. *Journal of Research on Technology in Education*, 38(3), 265-292.
- Du, H. S., & Wagner, C. (2007). Learning with weblogs: Enhancing cognitive and social knowledge construction. *IEEE Transactions on Professional Communication*, 50(1), 1-16.
- Gillespie, K. H. (1998). Using technology in faculty development: Practical examples. *New Directions for Teaching & Learning*(76), 79.

- Glazer, E., Hannafin, M. J., & Song, L. (2005). Promoting technology integration through collaborative apprenticeship. *Educational Technology Research and Development*, 53(4), 57.
- Klein, J. (2005). Effectiveness of school staff meetings: Implications for teacher-training and conduct of meetings. *International Journal of Research & Method in Education*, 28(1), 67-81.
- Koszalka, T. A. (2001). Effect of computer-mediated communications on teachers' attitudes toward using web resources in the classroom. *Journal of Instructional Psychology*, 28(2), 95.
- Lavonen, J., Lattu, M., Juuti, K., & Meisalo, V. (2006). Strategy-based development of teacher educators' ICT competence through a co-operative staff development project. *European Journal of Teacher Education*, 29(2), 241-265.
- Matzen, N. J., & Edmunds, J. A. (2007). Technology as a catalyst for change: The role of professional development. *Journal of Research on Technology in Education*, 39(4), 417-430.
- Posner. (2005). *Field experiences: A guide to reflective teaching* (6th ed.). New York: Allyn and Bacon.
- Stigler, J. W., & Hiebert, J. (1999). *The teaching gap : best ideas from the world's teachers for improving education in the classroom*. New York: Free Press.
- Tapscott, D., & Williams, A. D. (2006). *Wikinomics : how mass collaboration changes everything*. New York: Portfolio.